Title: IMAGE FORMING SYSTEM WITH SCANNER CAPABLE OF CHANGING MAGNIFICATION OF SCANNED IMAGE
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Appl. No.: 09/668,345

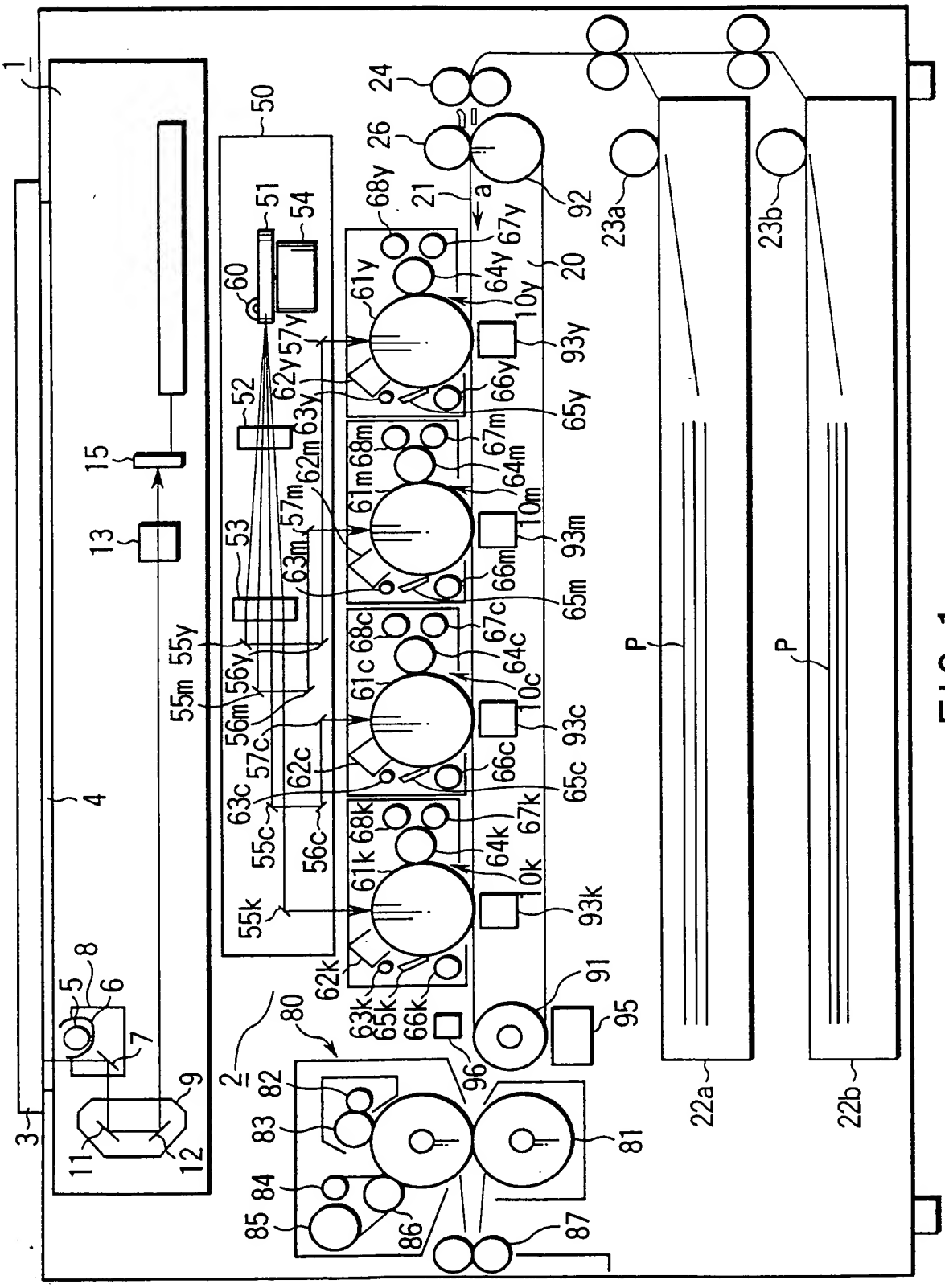

FIG. 1

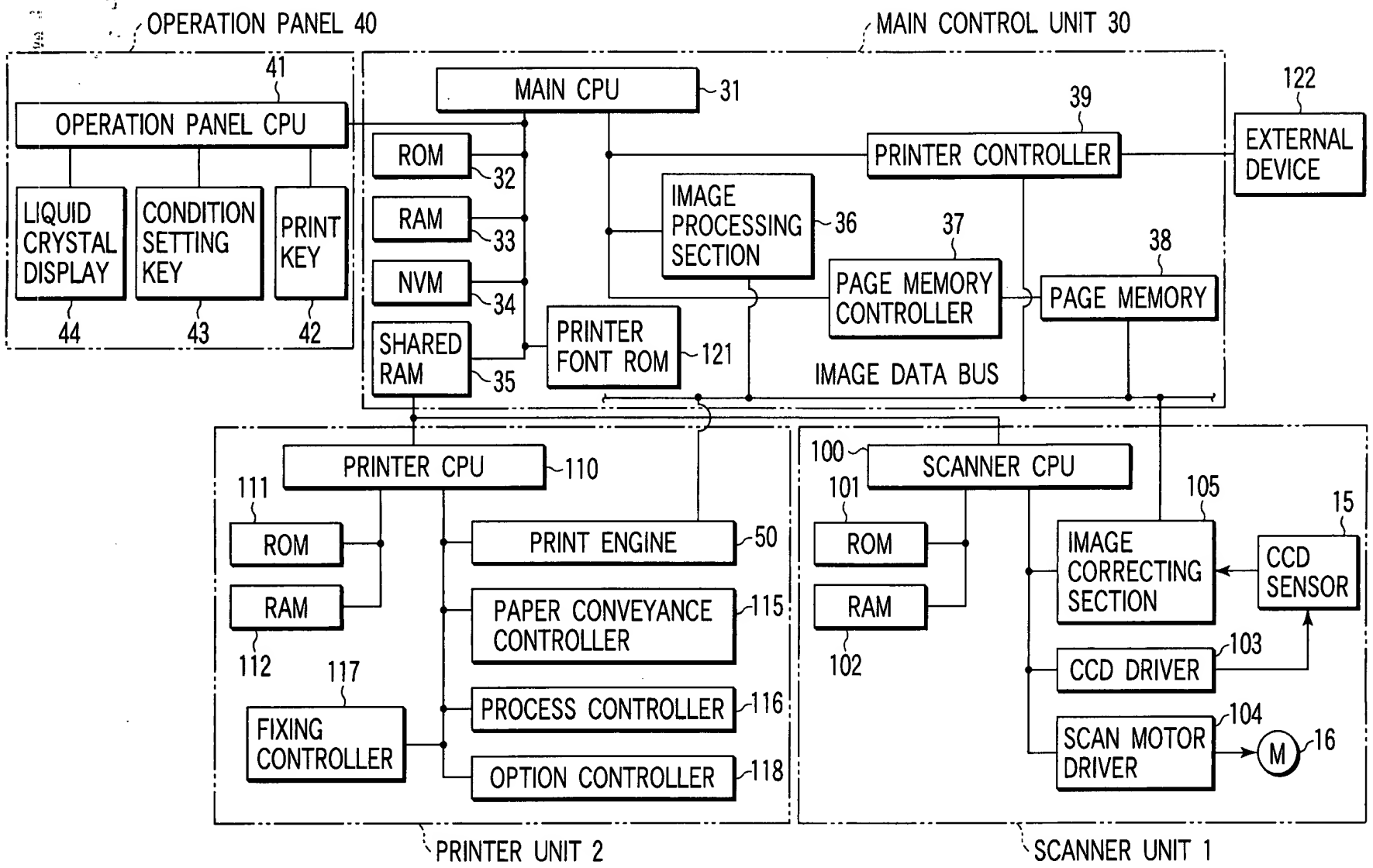

FIG. 2

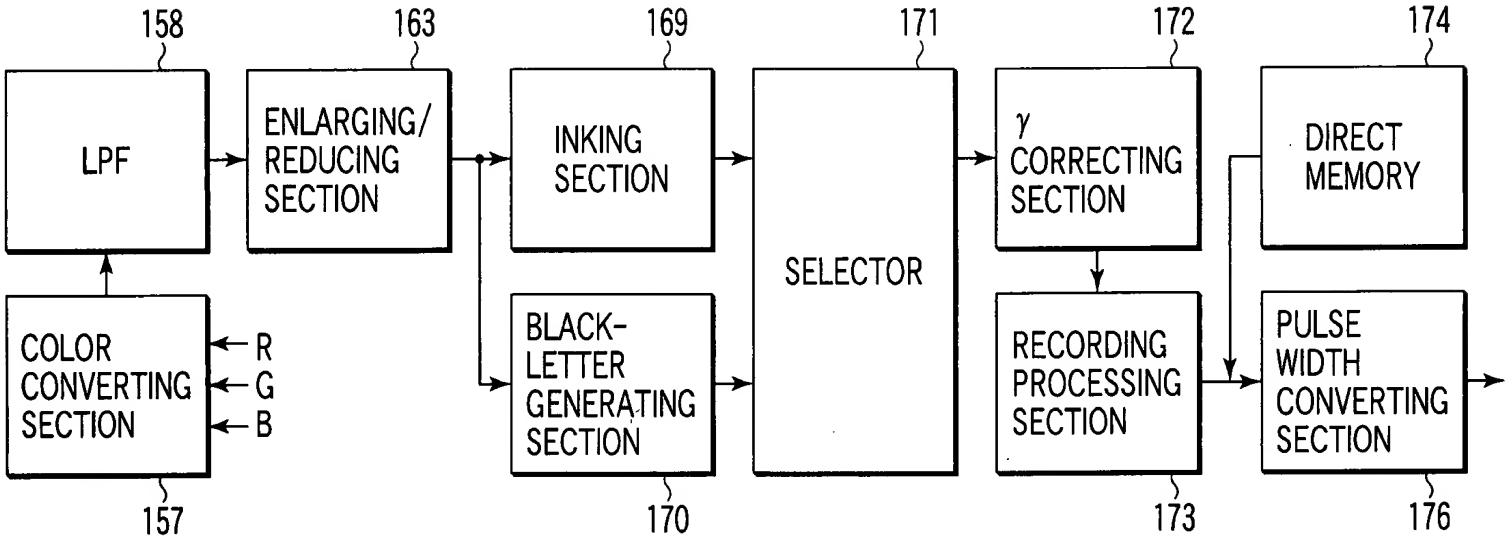

FIG. 3

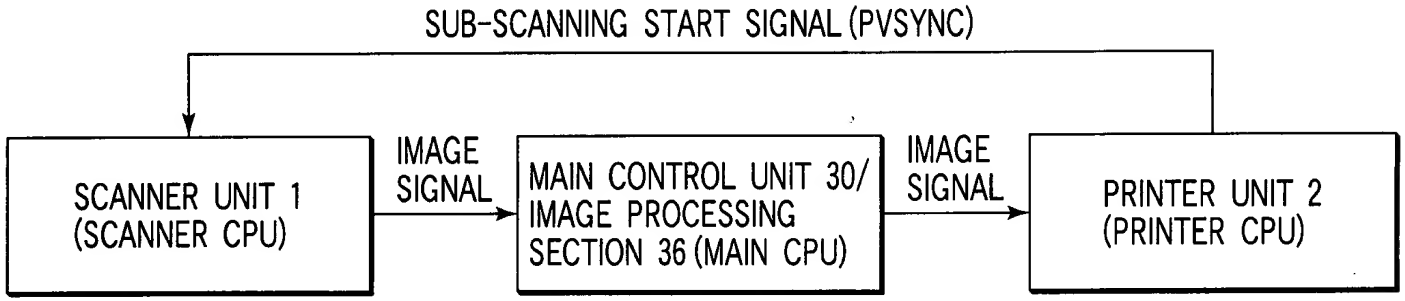

FIG. 4

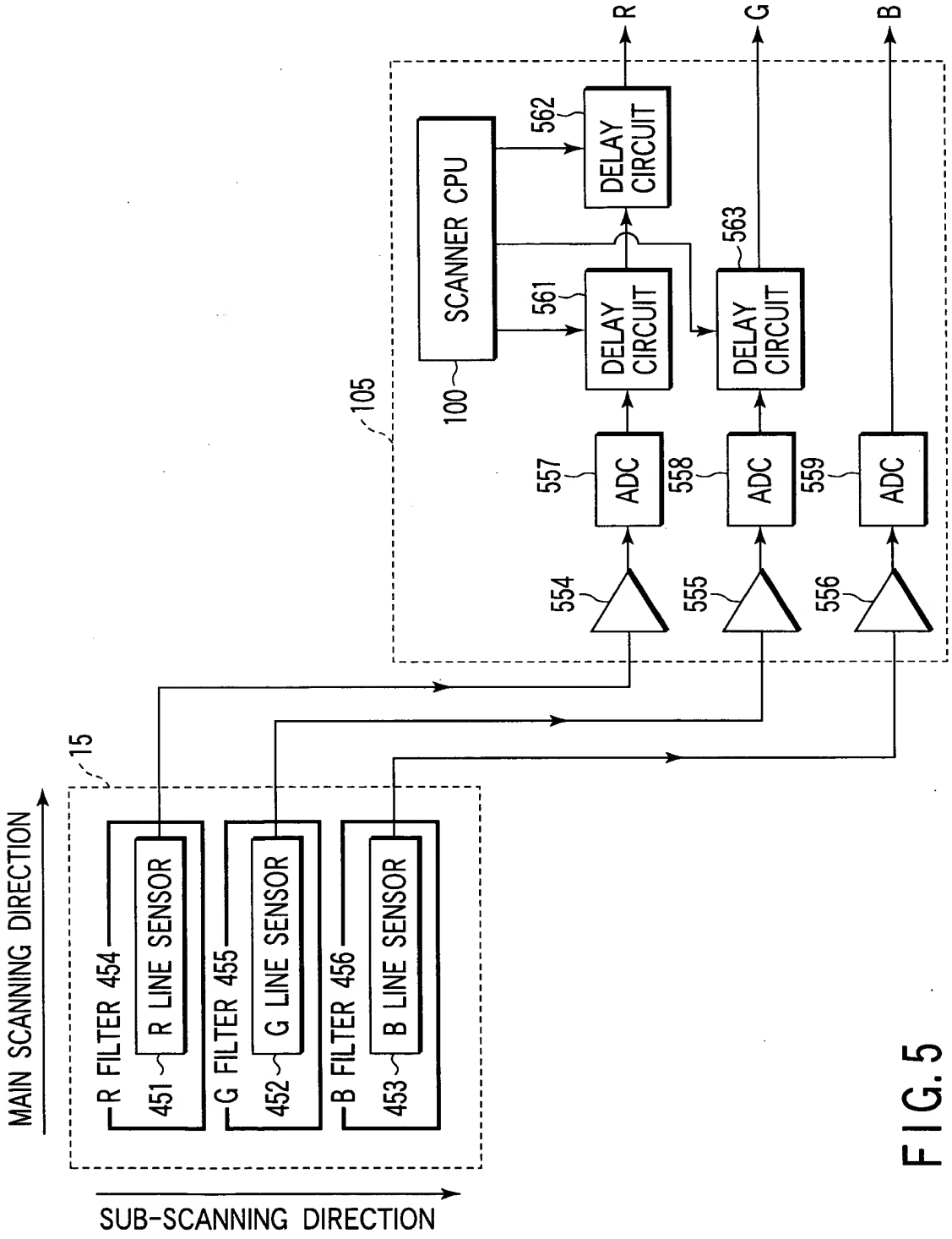
R
G
B
SCANNER CPU
100
105
562
DELAY CIRCUIT
561
DELAY CIRCUIT
563
DELAY CIRCUIT
557
ADC
558
ADC
559
ADC
554
555
556
15
MAIN SCANNING DIRECTION
R FILTER 454
451
R LINE SENSOR
G FILTER 455
452
G LINE SENSOR
B FILTER 456
453
B LINE SENSOR
SUB-SCANNING DIRECTION

FIG. 5

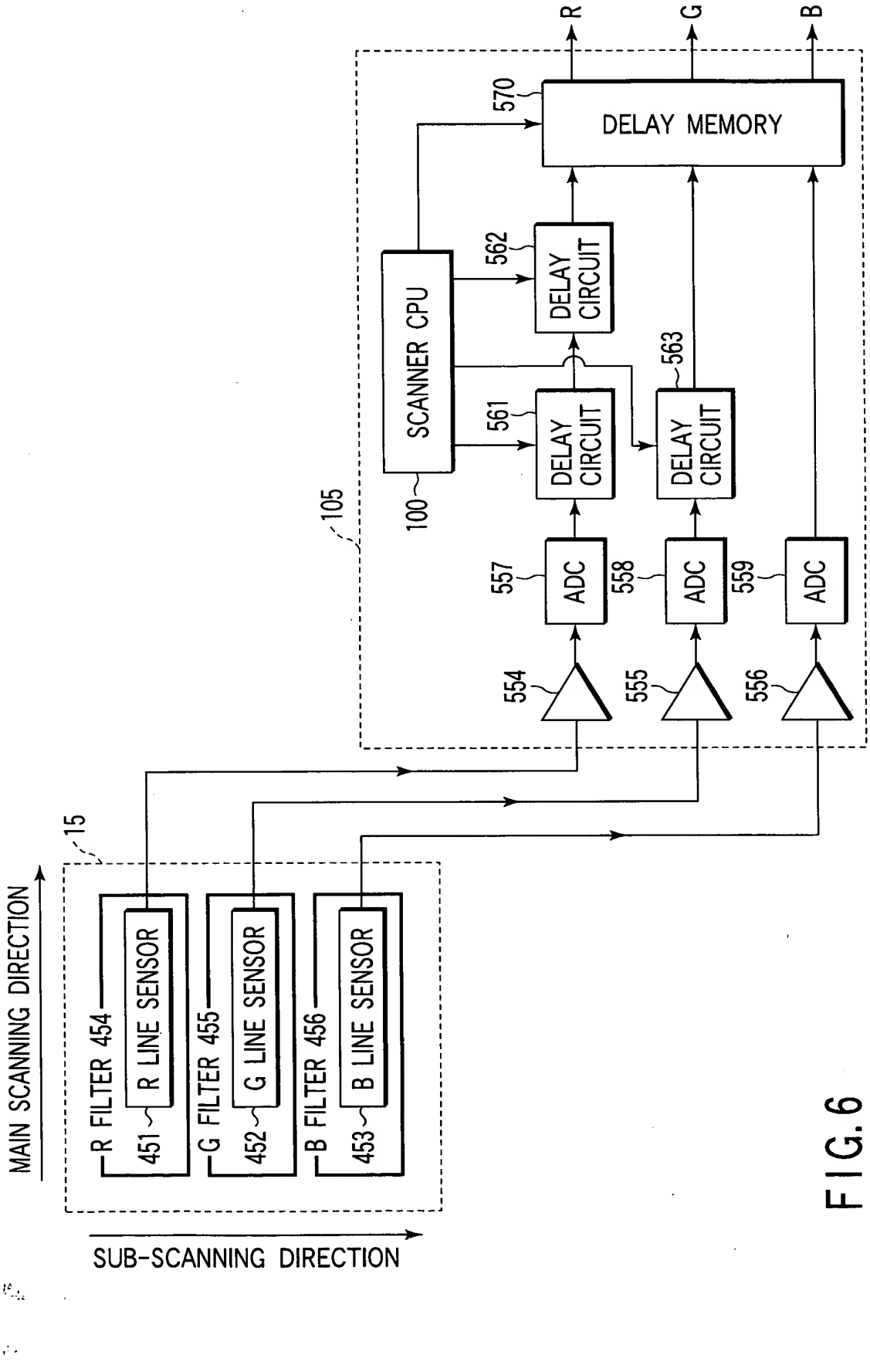
R
G
B
570
DELAY MEMORY
562
DELAY CIRCUIT
SCANNER CPU
563
561
DELAY CIRCUIT
DELAY CIRCUIT
100
105
557
ADC
558
ADC
559
ADC
554
555
556
15
MAIN SCANNING DIRECTION
R FILTER 454
R LINE SENSOR
451
G FILTER 455
G LINE SENSOR
452
B FILTER 456
B LINE SENSOR
453
SUB-SCANNING DIRECTION

FIG. 6

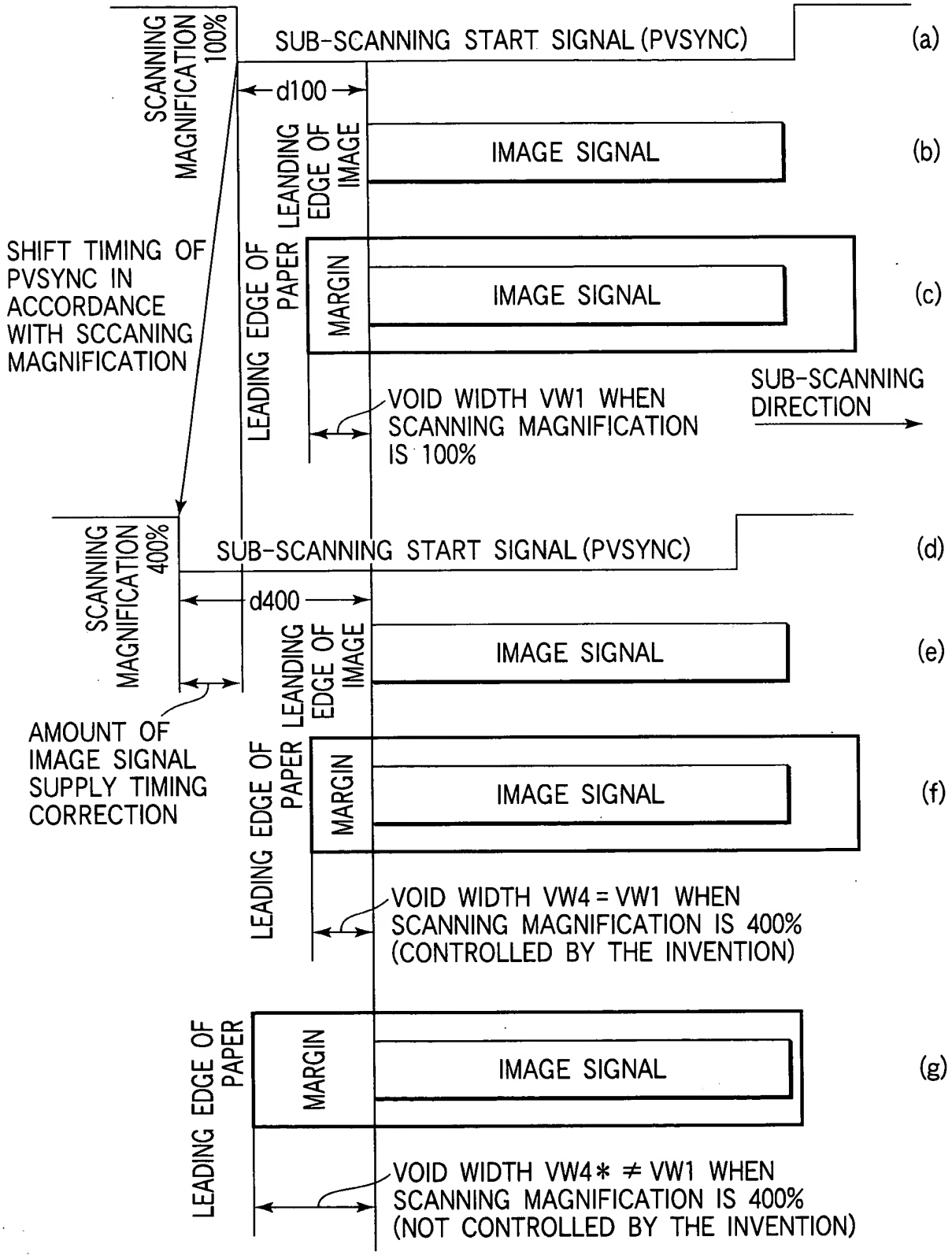
SCANNING MAGNIFICATION 100%
SUB-SCANNING START SIGNAL (PVSYNC)
(a)
d100
LEANDING EDGE OF IMAGE
IMAGE SIGNAL
(b)
SHIFT TIMING OF PVSYNC IN ACCORDANCE WITH SCCANING MAGNIFICATION
LEADING EDGE OF PAPER
MARGIN
IMAGE SIGNAL
(c)
SUB-SCANNING DIRECTION
VOID WIDTH VW1 WHEN SCANNING MAGNIFICATION IS 100%
SCANNING MAGNIFICATION 400%
SUB-SCANNING START SIGNAL (PVSYNC)
(d)
d400
LEANDING EDGE OF IMAGE
IMAGE SIGNAL
(e)
AMOUNT OF IMAGE SIGNAL SUPPLY TIMING CORRECTION
LEADING EDGE OF PAPER
MARGIN
IMAGE SIGNAL
(f)
VOID WIDTH VW4 = VW1 WHEN SCANNING MAGNIFICATION IS 400% (CONTROLLED BY THE INVENTION)
LEADING EDGE OF PAPER
MARGIN
IMAGE SIGNAL
(g)
VOID WIDTH VW4* ≠ VW1 WHEN SCANNING MAGNIFICATION IS 400% (NOT CONTROLLED BY THE INVENTION)

FIG. 7

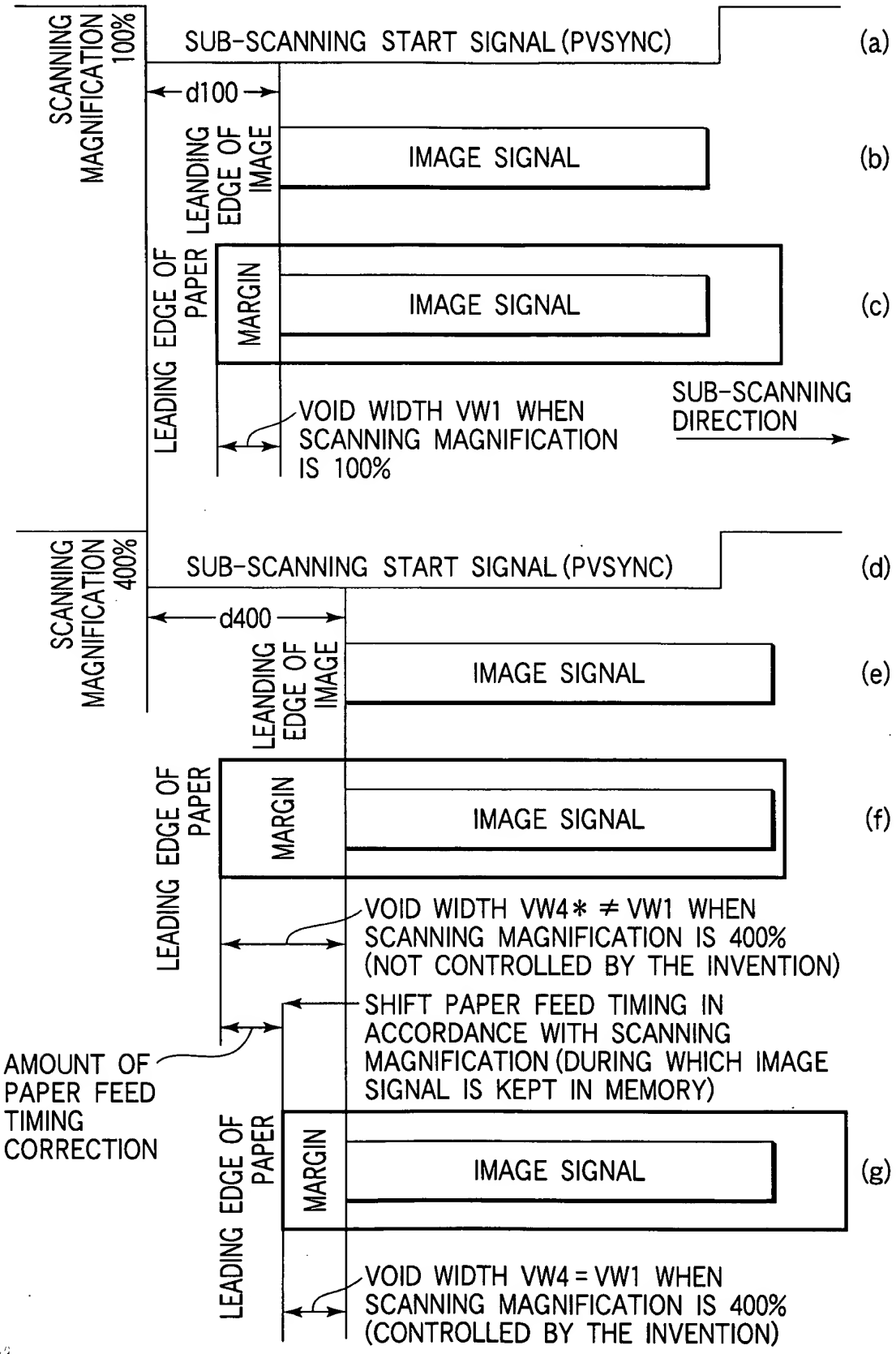
SCANNING MAGNIFICATION 100%
SUB-SCANNING START SIGNAL (PVSYNC)
(a)
d100
LEANDING EDGE OF IMAGE
IMAGE SIGNAL
(b)
LEADING EDGE OF PAPER
MARGIN
IMAGE SIGNAL
(c)
VOID WIDTH VW1 WHEN SCANNING MAGNIFICATION IS 100%
SUB-SCANNING DIRECTION
SCANNING MAGNIFICATION 400%
SUB-SCANNING START SIGNAL (PVSYNC)
(d)
d400
LEANDING EDGE OF IMAGE
IMAGE SIGNAL
(e)
LEADING EDGE OF PAPER
MARGIN
IMAGE SIGNAL
(f)
VOID WIDTH VW4* ≠ VW1 WHEN SCANNING MAGNIFICATION IS 400% (NOT CONTROLLED BY THE INVENTION)
SHIFT PAPER FEED TIMING IN ACCORDANCE WITH SCANNING MAGNIFICATION (DURING WHICH IMAGE SIGNAL IS KEPT IN MEMORY)
AMOUNT OF PAPER FEED TIMING CORRECTION
LEADING EDGE OF PAPER
MARGIN
IMAGE SIGNAL
(g)
VOID WIDTH VW4 = VW1 WHEN SCANNING MAGNIFICATION IS 400% (CONTROLLED BY THE INVENTION)

FIG. 8

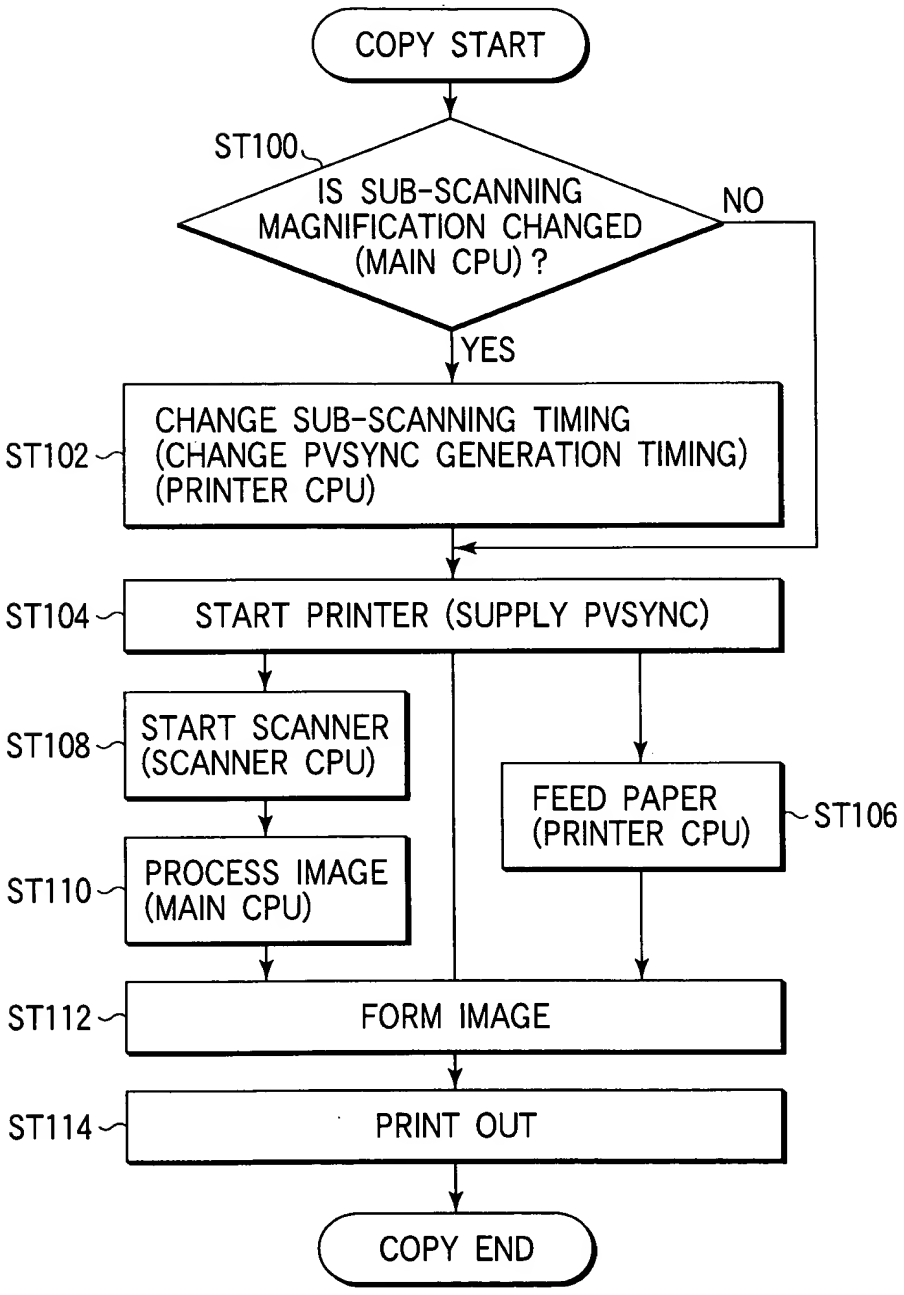
COPY START
ST100
IS SUB-SCANNING MAGNIFICATION CHANGED (MAIN CPU) ?
NO
YES
ST102
CHANGE SUB-SCANNING TIMING (CHANGE PVSYNC GENERATION TIMING) (PRINTER CPU)
ST104
START PRINTER (SUPPLY PVSYNC)
ST108
START SCANNER (SCANNER CPU)
ST110
PROCESS IMAGE (MAIN CPU)
FEED PAPER (PRINTER CPU)
ST106
ST112
FORM IMAGE
ST114
PRINT OUT
COPY END

FIG. 9

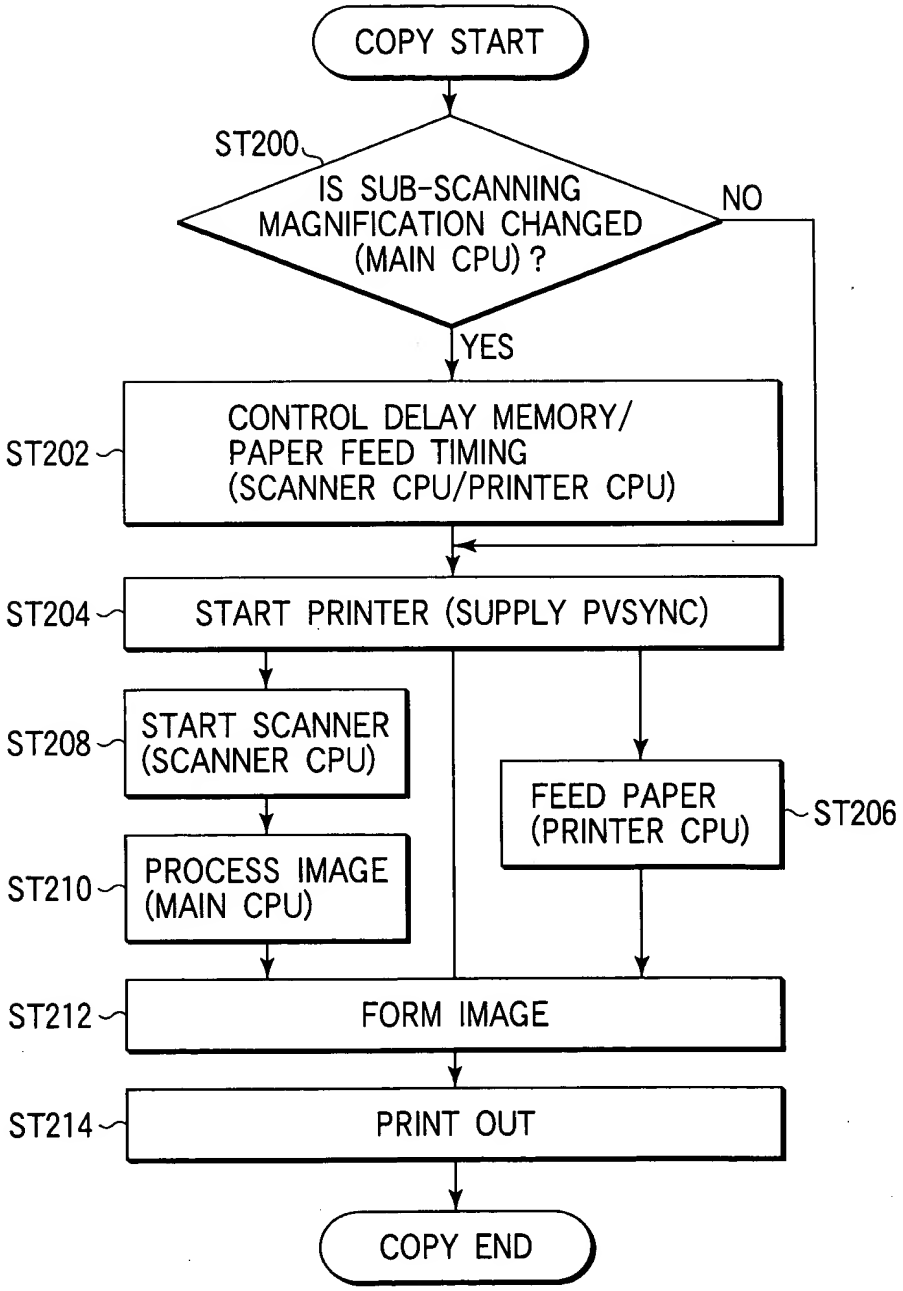
COPY START
ST200
IS SUB-SCANNING MAGNIFICATION CHANGED (MAIN CPU) ?
NO
YES
ST202
CONTROL DELAY MEMORY/ PAPER FEED TIMING (SCANNER CPU/PRINTER CPU)
ST204
START PRINTER (SUPPLY PVSYNC)
ST208
START SCANNER (SCANNER CPU)
FEED PAPER (PRINTER CPU)
ST206
ST210
PROCESS IMAGE (MAIN CPU)
ST212
FORM IMAGE
ST214
PRINT OUT
COPY END

FIG. 10